Cuchara Hazardous Fuels Reduction Project

Proposed Action – April 5, 2019

Introduction

A and lack of disturbance has led to an increasingly older and denser forest structure and high fuel loadings, promoting fire-prone forest conditions throughout the Cuchara project area. In 2018, the Spring Creek Fire burned over 108,000 acres and destroyed 104 homes adjacent to the project area and the East Peak Fire burned over 13,000 acres and destroyed 13 homes just east of the project area in 2013.

Lack of disturbance has also created conditions ripe for insect and disease outbreaks in the Spanish Peaks area. Spruce beetle, Douglas-fir beetle, western spruce budworm, mountain pine beetle and fir engraver beetle are currently impacting forests within and adjacent to the project area.

Forest management implemented to promote landscape diversity (various age, size, density, and species composition, etc.) is most effective at increasing stand resistance to insect infestations whereas uniform forested landscapes provide large adjacent areas of susceptibility to similar disturbances (Fettig et al. 2007, Fettig and Hilszczanski 2015). Insect infestations and outbreaks tend to occur when favorable host conditions (i.e., stands with little variability) coincide with favorable environmental conditions (i.e., drought). When these conditions align, the probability of encounters with a suitable host increases (i.e., one in which resistance mechanisms can be overcome) (Fettig et al. 2007). Forest management which promotes diversity in structure and stand age-classes combined with a reduction of accumulated surface/crown fuels also effectively reduces susceptibility to high intensity fires.

Purpose and Need

This area of the San Carlos District has had minimal vegetation projects over the past 2 decades. The project area has 930 structures within 1.5 miles of the treatment areas. There is a need to reduce the potential for large-scale, high-severity fires within the project area adjacent to subdivisions, private lands, infrastructure, and critical watersheds. Protecting and improving the watersheds in the project area is very important to the local communities as they supply municipal water to most of Huerfano County (Cucharas, La Veta, and Walsenburg), the community of Aguilar in Las Animas County, and to the City of Trinidad.

The purpose of this project is to use vegetation treatments to create and promote more open, healthy forest structure, to create landscapes that are more resilient to wildfire and insects and disease, and, to address increased fuel loads that have occurred as a result of fire suppression and insects and disease.

Project Location

The proposed project is located in the Spanish Peaks area of the San Carlos Ranger District in the northern portion of the Culebra Range on what was originally the Spanish Peaks Ranger District.

The legal description of the project area is: T31S, R70W, sections: 13, 24; T31S, R69W, T30S, R69W, sections: 4-6, 8, 9, 13, 15-23, 26, 28-31; T32S, R69W, section 6; T31S, R68W, sections: 15-18, T30S, R68W, sections: 23, 26, 35; all in the 6th Principle Meridian, Huerfano and Las Animas Counties, Colorado.

Forest Plan Management Areas

The PSICCs Land and Resource Management Plan (1984) guides management emphasis on NFS Lands within the PSICC planning area. The management areas within the proposed project are listed in Table 1.

Table 1. Project area Management Areas (MA)

MA	Emphasis	Forest Plan Citation
1B-1	Provides for existing winter sports sites	III-89 thru III-95
2A	Emphasis is on Semi-primitive Motorized Recreation Opportunities	111- 107 thru 111-115
2B	Provides opportunity for outdoor recreation in Roaded Natural and Rural Recreation Opportunity Spectrum settings,	111- 116 thru 111-124
3A	Provides opportunity for non-motorized recreation in a non-wilderness semi-primitive setting	111- 125 thru 111-133
4B	Provides wildlife habitat needs and permits dispersed motorized and non-motorized recreation and sustained forage yield	111- 134 thru 111-143
7A	Emphasis is on Timber Management	111- 169 thru 111-178
10E	Provides for the management of municipal watersheds to protect or improve water quality and quantity	111- 233 thru 111-241

Proposed Action

A combination of mechanical and hand treatments including thinning, piling, chipping (mastication), patch cuts, and prescribed fire will be applied to meet project objectives. A detailed description of the vegetation types and specific treatment based on desired conditions are listed in Table 2.

Treatments may involve the use of mechanized tree harvesters, masticators, feller-bunchers, rubber tired skidders, forwarders, chippers, chainsaws or other mechanized equipment to treat approximately 2,950 acres of ponderosa pine, white fir, limber pine, Engelmann spruce, lodgepole pine, aspen, Douglas-fir, and Gamble oak and other on-site vegetation. The type of treatment selected will depend on the vegetation type, terrain, design criteria and the ability to meet the objectives of the project.

Table 2. Proposed treatment by resource type

Resource Type	Acres	Treatment Objective
Alpine	21	No treatment
Water	9	No treatment
Rock	30	No treatment
Grass	157	Remove conifer encroachment and maintain as grasslands. Pile and burn slash created from mechanical and hand treatments
Ponderosa pine	46	Thin from below favoring ponderosa pine. Reduce density to levels where crown fire is less likely. Remove shade tolerant species (white fir, Douglas-fir) that are competing with ponderosa. Pile and burn slash created from mechanical and hand treatments. Fuelwood may be removed where there is access.
Aspen	1,027	Remove competing conifers and maintain aspen dominance of the site. Coppice cut (clear-cut) up to 20% of aspen acreage to re-sprout aspen and create age class diversity. Pile and burn

		slash created from mechanical and hand treatments. Fuelwood may be removed where there is access.
Mixed conifer	587	This group includes a species mix of Douglas-fir, white fir, aspen ponderosa pine and lodgepole pine. Treat up to 20% of the area via the group selection method. Between group selections, thin from below favoring ponderosa pine (where available), promote aspen retention and sprouting to reduce density to levels where crown fire is less likely. White fir and to a lesser extent Douglas-fir would be targeted for removal. Pile and burn slash created from mechanical and hand treatments. Fuelwood may be removed where there is access.
Bristlecone/Limber pine	43	Remove other conifer species to reduce competition with 5 needle pines and maintain the open character of these stands. Thin from below to reduce density to levels where crown fire is less likely. Pile and burn slash created from mechanical and hand treatments. Fuelwood may be removed where there is access.
Spruce/fir	735	Treat up to 20% of the area via the group selection method and salvage dead and insect infested trees. Between group selections and salvage areas, thin from below to create more open forest conditions. Favor aspen retention and sprouting where possible. Reducing density to lower crown fire risk must be balanced with mitigating blowdown risk of the post treatment forest. Pile and burn slash created from mechanical and hand treatments. Fuelwood may be removed where there is access.
Gambel oak	270	Masticate, crush or hand cut and pile stands to modify fire behavior. Pile and burn slash created from hand cut and pile operations. Fuelwood may be removed where there is access.

Fuel breaks/Escape routes – Where roads are being used for escape routes or where fuel breaks are desired, in addition to treatments described by vegetation type above, additional measures will be implemented. Cut and remove all snags within these areas and pile slash and boles for burning. Remaining trees will be limbed to reduce ladder fuels and lower crown fire risk. Existing fuels on the forest floor will be cut and piled or removed to the extent necessary to maintain properly functioning fuel breaks and escape routes. Fuelwood may be removed where there is access. The main purpose of these treatments is to create forest conditions where fire behavior is reduced to the point where successful and safe firing operations are possible, significant reduction of potential fire behavior is likely post treatment and escape routes are less likely to be compromised due to expected fire behavior.